



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

OCT 1 2014

REPLY TO THE ATTENTION OF:
WC-15J

CERTIFIED MAIL 7011 1150 0000 2639 5933
RETURN RECEIPT REQUESTED

FOIA Exemption (b) (6)

Calamity Knoll

FOIA Exemption (b) (6)

Subject: Clean Water Act Compliance Evaluation Inspection Report

Dear Mr. **FOIA Exemption (b) (6)**

On April 24, 2014, U.S. Environmental Protection Agency conducted an inspection of your facility, Calamity Knoll in Clinton, Wisconsin. The purpose of the inspection was to evaluate compliance with your Wisconsin Pollutant Discharge Elimination System (WPDES) permit. Enclosed is a copy of EPA's inspection report.

Calamity Knoll is a large Concentrated Animal Feeding Operation (CAFO) as defined in 40 C.F.R. § 122. Agricultural operations, such as Calamity Knoll, have been shown to be sources of pollution to local water bodies through improper management resulting in manure and process wastewater runoff at the production and land application area of the CAFO. EPA observed multiple areas of concern during the inspection. The areas of concern are noted in the inspection report. It is important to address these areas of concern as they can contribute pollutants to tributaries of the Rock River.

Please provide a written response to the issues identified in the report within 30 days. In your response, include a description of corrective actions taken. Please include a complete description of the rationale for Calamity Knoll's calculation of land application rates. Please include a description of Calamity Knoll's land application procedures. Your response should be mailed to:

Donald R. Schwer III
Water Division, WC-15J
U.S. EPA Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

If you have any questions or concerns regarding this letter, or the inspection report, please contact Donald R. Schwer III at (312) 353-8752 or schwer.don@epa.gov. Your cooperation in this matter is appreciated.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ryan Bahr". The signature is fluid and cursive, with the first name "Ryan" and last name "Bahr" clearly distinguishable.

Ryan Bahr, Chief, Section 2
Water Enforcement and Compliance Assurance Branch

Enclosure

Cc: Mark Cain, Wisconsin Department of Natural Resources

**CWA COMPLIANCE EVALUATION INSPECTION REPORT
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5**

Purpose: Compliance Evaluation Inspection

Facility: Calamity Knoll

FOIA Exemption (b) (6)

NPDES Permit Number: WI-0059048-03-0

Date of Inspection: April 24, 2014

EPA Representatives: Donald R. Schwer III, Enforcement Officer
schwer.don@epa.gov, 312-353-8752

Cheryl Burdett, Life Scientist

State Representatives: Mark Cain, Wastewater Engineer
608-275-3252

Facility Representatives:

FOIA Exemption (b) (6)

Report Prepared by: Donald R. Schwer III

Report Date: August 7, 2014

Inspector Signature

DR Schwer III

1. BACKGROUND

The purpose of this report is to describe, evaluate and document Calamity Knoll's compliance with the Clean Water Act (CWA) and the Wisconsin Pollutant Discharge Elimination System (WPDES) permit no. WI-0059048-03-0 at its Clinton, Wisconsin facility on April 24, 2014. This inspection was performed pursuant to Section 308(a) of the Federal Water Pollution Control Act, as amended.

The facility is a concentrated animal feeding operation (CAFO) with approximately 1200 cattle and 3000 swine. The facility has been permitted by Wisconsin Department of Natural Resources (WDNR) since the mid-nineties. The current permit, WI-0059048-03, has an effective date of April 1, 2013 and an expiration date of March 31, 2018. As conditions of the permit, the facility is required to maintain and update the Nutrient Management Plan (NMP) annually, submit annual reports, develop an Emergency Response Plan, develop a monitoring and inspection program, complete the installation of runoff control practices, and submit an updated Pasture Management Plan.

Surface water runoff from the facility drains east or north to perennial Spring Brook which is adjacent to the north end of the facility. Spring Brook flows approximately 7.8 miles to perennial Turtle Creek. Turtle Creek flows approximately 2.2 miles to the Rock River. The Rock River has a Total Maximum Daily Load (TMDL) for excessive phosphorus and sediment concentrations. The Rock River flows to the Mississippi River, a Traditional Navigable Water.

2. SITE INSPECTION

I arrived at Calamity Knolls at approximately 9:45 a.m. on April 24, 2014. I parked the vehicle near the entrance of the facility. The temperature was approximately 50° F and it was overcast. Upon arrival, Ms. Burdett and I put on disposable boots. I introduced myself and presented credentials to FOIA Exemption (b) (6) and FOIA Exemption (b) (6). I explained to the FOIA Exemption (b) (6) that I would be conducting a Concentrated Animal Feeding Operation (CAFO) inspection to evaluate Calamity Knoll's compliance with the requirements of the CWA and WPDES permit. I explained that the inspection would consist of a review of facility operations, required records, waste generation and management practices, and a visual inspection of the site. I stated that I would document my findings and observations by taking photographs and by collecting samples if necessary. FOIA Exemption (b) (6) stated that the facility was trying to get a corn planter in the field the day of the inspection. I explained Calamity Knoll's right to make a claim of business confidentiality and presented FOIA Exemption (b) (6) with a Confidentiality Notice. FOIA Exemption (b) (6) did not make any confidentiality claims at the time of the inspection.

2.1 Interview

The facility employs two full time employees other than family. FOIA Exemption (b) (6) said the facility production area is comprised of approximately 7 acres and that approximately 40 acres are devoted to pasture. FOIA Exemption (b) (6) said the facility currently has 1200 beef cattle

with 70 cattle on pasture. The facility has approximately 3000 swine from farrow to finish.

Table 1: Animal Numbers (sourced from 2012 NMP update)

Type of Animal	Number of Animals
Beef Cattle	1200
Baby Pigs	1370
Pigs	1370
Sows	245
Boars	12
Amount of Manure Generated per year:	347,000 gallons, 6586 tons

Livestock Waste Management

Liquid manure and process wastewater are stored in the Coughlin Pit which is a wastewater holding pond with a concrete and earthen liner. The Coughlin Pit contains waste generated from open lot areas around the Gestating Barn and Beef Barn. The Arnold Building and Kimberly Barn have underground storage pits. The Arnold Building underground pit contains waste generated from the Arnold Building, West Wing, Farrowing Barn, and Gestation Barn. Solid bedded manure is generated at the Boar Barn, Sayle's Barn, Beef Barn, Hartgarten Barn, Cow Palace, Gilt Shed, East Lot, Bruce Barn, Robbie's Pen, North Shed, and Becky's Barn. Solid manure is scraped and land applied approximately once per week. During the months of February and March, solid manure is headland stacked. Mortalities are composted at the facility.

The facility has not develop and submitted a proposed monitoring and inspection program which was due July 1, 2013 as required by the permit. The facility does not record daily inspection of water lines, weekly inspections of storm water diversion devices and devices channeling contaminated runoff, or weekly inspections of liquid storage.

Receiving Surface Waters

A drainage ditch runs east/northeast along the southern end of the production. All runoff from the facility drains to Spring Brook. [FOIA Exemption (b) (6)] said Spring Brook flows year round. Spring Brook was flowing at the time of the inspection.

2.2 Land Application- Nutrient Management Plan (NMP)

A thorough review of the facility's land application records could not be completed because the facility did not have the latest Annual Reports for year 2012 and 2013. The [FOIA Exemption (b) (6)] did not know if they had ever been submitted to WDNR. Mr. Cain of WDNR was not able to locate these reports prior to the inspection. The facility does not record daily land application on form 3200-123A as required by Section 1.8.3 of the permit. The facility does not record weather or soil conditions during land application. The

facility does not submit Annual Report records through form 3200-123 as required by Section 1.8.3 of the permit.

I reviewed records for land application for the 2008-2011 crop year, which were obtained from WDNR. The facility has applied manure in excess to multiple fields within this time period. Fields 7, 11A, 11B, 13, and 15 all had soil test levels which were above 200 ppm P_2O_5 /Acre. At the soil test level of 200 ppm P_2O_5 /Acre, application of manure is prohibited according to the Permit and the NMP. All of these fields had been applied to in this time period and most were applied to multiple years in a row.

For soil test levels of 100 ppm to 200 ppm P_2O_5 /Acre, application of manure is to be at 50% of the cumulative crop removal over a maximum 4 year rotation according to the Permit and NMP. Due to insufficient records, the crop uptake rate over this time period could not be calculated. Using the general crop rotations the facility has used in the Snap Plus reports and general yield parameters, it appears that the facility has applied excessive quantities of phosphorus above the 50% cumulative crop removal to the following Fields: 6, 8, 9, 16A, 16B, 17, 18, 19, and Dutch West.

The facility has not appropriately applied solid manure during frozen or snow covered ground conditions according to the Permit. The facility lacks appropriate solids characterization of manure in many instances. For instance, for fields with greater than a 6% slope, the minimum solids content for application needs to be greater than 20%. The facility lacks records which exhibit this information for winter application. In addition, it appears that they have exceeded the maximum application rate required under frozen and snow covered ground conditions. For instance, Dutch West field had manure applied to it during January 2011. The facility did not analyze this manure until March 24, 2011. The facility calculated that the land application resulted in an addition of about 73.4 lbs P_2O_5 /acre. This rate exceeded the maximum permitted application rate of 60 lbs P_2O_5 /acre during frozen or snow covered ground conditions.

The facility has not sampled its manure sources with the required frequency stated in the permit. The permit requires sampling of solid manure once quarterly and sampling of liquid manure monthly. The facility sampled as little as once per year. The Snap-Plus report shows that the facility has not taken the appropriate number of soil test samples from Fields 2, 7, 10, 11A, 14, 16A, 19. The facility does not have an explicit quantity for their projected and actual yields for the field crops that they grow. The facility's NMP states that they will not land apply under conditions in which greater than a 50% chance of a 2 inch precipitation event will occur. The facility does not document soil or weather conditions during application as required by the permit. The facility has not calibrated and recorded its calibration of its manure hauling equipment as required by the permit.

2.3 Walkthrough of the Facility

To facilitate the walkthrough section of this report, overview maps are included in Attachment 1 which includes building labels, outlines of drainage pathways, and waterway locations. The inspection photographs are in Attachment 2.

I observed animal walkways near the Arnold and Sayle's Barn (Attachment 2: IMGP0627; IMGP0628). Portions of the walkway were sloped such that runoff from the animal walkway would flow toward the east to a pathway along the south end of the Coughlin Pit. The pathway hugs the south and then the east side of the Coughlin pit. Within this pathway at the southeast corner of the Coughlin pit, there was dark and septic smelling water (Attachment 2: IMGP0630; IMGP0631). There was dead vegetation throughout the pathway (Attachment 2: IMGP0630; IMGP0632). This pathway connected with a culvert at the northeast end of the Coughlin pit, which ran east under the access road and outlet into a pathway along the south side of Hartgarten Barn (Attachment 2: IMGP0633). The pathway continues east along the south side of the Hartgarten Barn (Attachment 2: IMGP0635). The surface drainage then followed the general direction as exhibited in the diagrams in Attachment 1.

In the southeast corner of Cow Palace, there was a culvert going under the access road to the east (Attachment 2: IMGP0637). Surface drainage flowing into this culvert would come into contact with manure and bedding around the outside of the Cow Palace (Attachment 2: IMGP0637; IMGP0638). I observed manure and bedding solids around and leading up to the entrance of the culvert. The culvert outlet to the east. I observed manure and bedding solids around the outlet of the culvert (Attachment 2: IMGP0640; IMGP0641; IMGP0642; IMGP0643). I observed manure and bedding solids throughout a pathway in the vegetated area that the culvert outlet into. Dead vegetation was observed throughout the vegetated area pathway. The Gilt Shed had open lots. Surface runoff from the open lots had no containment and would flow east (Attachment 2: IMGP0644). FOIA Exemption (b) (6) said that they have placed straw bales east of the Gilt Shed in the past to reduce runoff of manure from the Gilt Shed.

I observed solids buildup and ponding of manure and process wastewater east of the Bruce Barn (Attachment 2: IMGP0646; IMGP0648). The open lots around the Bruce Barn and Robbie's Pen drained through Bruce Barn into this area before flowing into the field to the northeast of Bruce Barn (Attachment 2: IMGP0647). FOIA Exemption (b) (6) said that in the past they have placed hay bales into drainage pathway through the field to reduce runoff of manure from these open lots. The drainage pathway in the field flows to Spring Brook. The push out of manure was observed in the northeast corner of Bruce Barn (Attachment 2: IMGP0649). The surface runoff flows east. The facility had a stack of manure between Bruce Barn and Robbie's Pen (Attachment 2: IMGP0650). There was no containment for process wastewater generated at the manure stack.

We continued to the feed storage bunkers on the east end of the facility. Throughout the pasture to the north and east of the production area, cattle had direct access to Spring Brook (Attachment 2: IMGP0651). On the east corner of the feed bunkers there was a pipe which diverted process wastewater to a 4,000 gallon reception tank (Attachment 2: IMGP0653). During the inspection, the reception tank was full. The overflow from the reception tank would flow to the east and connect with a gully that flows to Spring Brook (Attachment 2: IMGP0654; IMGP0659). I observed a small stack of waste feed to the south of the feed bunkers (Attachment 2: IMGP0662).

I observed manure and feed from the East Lot that had run off the southeast corner and into the access road (Attachment 2: IMGP0665). This area appeared to drain to the east (Attachment 2: IMGP0666). In the lot to the south of the East Lot, I observed feed solids scattered throughout a feeding area (Attachment 2: IMGP0667). This area drained to the east. A large compost pile was located within the lot south of the East Lot (Attachment 2: IMGP0668; IMGP0673). I observe that there was no containment for any process wastewater generated at the compost pile. The compost area drained to the northeast to Spring Brook. I asked [FOIA Exemption (b) (6)] what kind of operational procedures he used for the compost pile. He said he just added carcasses and covered them. He did not have a monitoring or inspection plan for the compost pile. The compost pile was not in an approved structure.

I observed dead vegetation throughout the drainage pathway draining from east of the Hartgarten and Cow Palace barns (Attachment 2: IMGP0674). I observed manure and bedding solids throughout the pathway that came around both the south and the north end of the Silos (Attachment 2: IMGP0674; IMGP0684; IMGP0685). The drainage pathway continued east through a culvert under an access road (Attachment 2: IMGP0682). I observed manure and process wastewater at the inlet of the culvert, near the outlet of the culvert and in the drainage pathway (Attachment 2: IMGP0675; IMGP0676; IMGP0681; IMGP0683). The drainage pathway flows east and northeast to Spring Brook. The open lot between the Bruce Barn and Robbie's Pen drained to the east/northeast (Attachment 2: IMGP0687).

2.4 Closing Conference

At the conclusion of the walkthrough, I summarized my findings and observations to [FOIA Exemption (b) (6)] and [FOIA Exemption (b) (6)]. I notified them of the following areas that had uncontrolled runoff: Gilt Shed, Bruce Barn, Robbie's Pen, East Lot, Feed Bunkers, Compost Pile, and the area east of Cow Palace. I notified them that the facility needs to be keeping all records as required by the permit. I notified them that the facility needs to submit reports required by the permit, including monitoring and inspection program and annual reports. I also explained that these findings do not constitute a final enforcement determination and are provided to assist the facility in their compliance efforts.

2.5 Sampling Information

Sampling was conducted at various locations of the production area to determine the presence of pollutants that could impact Spring Brook. [FOIA Exemption (b) (6)] and [FOIA Exemption (b) (6)] accompanied EPA during sampling, and EPA offered to split samples. The facility wanted to split samples. Samples were tested for fecal coliform, biochemical oxygen demand (BOD), total dissolved solids (TDS), total suspended solids (TSS), ammonia nitrogen, nitrate- nitrite nitrogen, total Kjeldahl nitrogen (TKN), and total phosphorus (TP).

A field blank was taken at 1:00 p.m. Sample S01 was taken at 1:15 p.m. of manure/process wastewater in the drainage pathway south of the East Lot (Attachment 2: IMGP0689; IMGP0690). Sample S02 was taken at 1:25 p.m. of water in gulley northeast of the feed bunkers (Attachment 2: IMGP0691; IMGP0692). Sample S03 was taken at 1:40 p.m. of process wastewater from the underground tank that accepts drainage from the Feed Bunkers (Attachment 2: IMGP0395; IMGP0696). Sampling concluded at 1:45 p.m. I took all samples. Samples were preserved according to EPA Region 5 Field Sampling Plan. Sampling locations can be seen in Attachment 1: Figure 2. We left the facility at 2:30 p.m.

The results of the sampling, summarized in Table 2, indicate that multiple areas contained pollutants which could impact Spring Brook. All of the samples had quantities of fecal coliform. Additionally, several forms of nitrogen are contained in the samples, as indicated by the TKN, nitrate- nitrite nitrogen, and ammonia nitrogen sampling results. Total Phosphorus, TDS, and TSS were present in the samples. The laboratory results are in Attachment 3.

Table 2: Field Sampling Results

Sample ID	Fecal Coliform (CFU/100ml)	Biochemical Oxygen Demand (BOD) (mg/L)	Total Kjeldahl Nitrogen (TKN) (mg/L)	Nitrate- Nitrite Nitrogen * (mg/L)	Ammonia Nitrogen* (mg/L)	Total Phosphorus (mg/L)	Total Dissolved Solids (TDS) (mg/L)	Total Suspended Solids (TSS) (mg/L)
SO1	16690	370	97.7	.09	23.1	64.2	1530	320
SO2	100	6	3.39	12.8	.18	.3	476	53
SO3	1890	4200	369	U	176	39.5	3760	422
BO1	-	U	U	U	U	U	U	U

U-Undetectable, * samples flagged due to exceedence in sample preservation temperature

3. POTENTIAL VIOLATIONS

According to Permit Section 1.1 Production Area Discharge Limitations, "The permittee may not discharge pollutants to navigable waters under any circumstance or storm event from areas of the production area, including manure stacks on cropland, where manure and process wastewater is not properly stored or contained by a structure."

EPA observed conditions that could lead to potential discharges at the following locations:

1. Manure and process wastewater at the east end of the Cow Palace flows through a pipe and outlets to an area that contained vegetation. This area flows to the surface drainage pathway. The surface drainage pathway flows to Spring Brook.
2. Manure and process wastewater generated in the open lot of the Gilt Shed flows east toward the surface drainage pathway. The surface drainage pathway flows to Spring Brook.
3. Manure and process wastewater generated in Robbie's Pen and Bruce Barn, and their respective open lots, flows east and then northeast through a pathway in a field to Spring Brook.
4. Manure and process wastewater generated at the East Lot flows east/northeast to Spring Brook.
5. Process wastewater generated at the feed storage bunkers flowed east through a pipe into a 4,000 gallon underground tank. The tank was full during the inspection. Overflow from the tank flows east into a gulley which flows north to Spring Brook.
6. Process wastewater generated at the compost pile did not have containment. The location and slope of the land surrounding the compost pile are such that process wastewater would flow to Spring Brook.
7. Manure and process wastewater contained on the animal walkway near the Arnold and Sayle's Barn could flow east through pathways toward Spring Brook.

According to Permit Section 1.5 Ancillary Services and Storage Areas, "For CAFO outdoor vegetated areas, the permittee shall also implement the following practices . . . Prohibit direct access of livestock or poultry to surface waters or wetlands located in or adjacent to the area unless approved by the department."

At the time of the inspection, cattle had direct access to Spring Brook through the pastures located north and east of the production area.

According to Permit Section 1.6 Nutrient Management, "The permittee shall land apply manure and process wastewater in compliance with the Department approved nutrient management plan, s. NR 243.14 and the terms and conditions of this permit."

At the soil test level of 200 ppm P₂O₅/Acre, application of manure is prohibited according to NR 243.14. Fields 7, 11A, 11B, 13, and 15 all had soil test levels which were above 200 ppm P₂O₅/Acre. All of these fields had been applied to and most were applied to multiple years in a row.

For soil test levels of 100 ppm to 200 ppm P₂O₅/Acre, application of manure is to be at 50% of the cumulative crop removal over a maximum 4 year rotation. Due to insufficient records, the crop uptake rate over this time period could not be calculated. Using the general crop rotations the facility has used in the Snap Plus reports and general yield parameters, it appears that the facility has applied excessive quantities of phosphorus above the 50% cumulative crop removal to the following Fields: 8, 9, 16A, 16B, 17, 18, 19, and Dutch West.

According to Permit Section 1.6 Nutrient Management, "the permittee shall maintain daily spreading records and submit annual reports relating to land application activities in accordance with s. NR 243.19."

The facility did not have the latest Annual Reports for year 2012 and 2013. The FOIA Exemption (b) (6) did not know if the Annual Report for 2012 had ever been submitted to WDNR. Mr. Cain of WDNR was not able to locate the Annual Report for 2012 prior to the inspection.

The facility does not record daily land application logs on form 3200-123A. The facility does not document all daily land application log requirements, including but not limited to soil or weather conditions at the time of application.

The facility does not submit Annual Report records through form 3200-123. The facility does not document all Annual Report requirements.

The facility has not calibrated and recorded its calibration of its manure hauling equipment.

The facility does not have an explicit quantity for their projected and actual yields for the field crops that they grow.

The facility's NMP states that they will not land apply under conditions in which greater than a 50% chance of a 2 inch precipitation event will occur. This precipitation event significantly exceeds the rate in which you would expect runoff to occur from a field. The facility has not recorded weather conditions during application.

According to Permit Section 1.6.5 Frozen or Snow Covered Ground

The facility has not appropriately applied solid manure during frozen or snow covered ground conditions. The facility lacks appropriate solids characterization of manure in many instances. For instance, for fields with greater than a 6% slope, the minimum solids content for application needs to be greater than 20%. The facility lacks records which exhibit this information for winter applications. In addition, it appears that they have exceeded the maximum application rates required under frozen and snow covered ground conditions.

According to Permit Section 1.7.1 Monitoring and Inspection Program, "the permittee shall submit a monitoring and inspection program designed to determine compliance with permit requirements."

The facility did not submit a monitoring and inspection program.

The facility did not document daily and weekly inspections at the production area and inspections of the field during land application.

According to Permit Section 1.7.2 Sampling Requirements, "The permittee shall collect and analyze representative samples of land applied manure and process wastewater for the parameters outlined in the monitoring requirements for each sample point. The permittee shall also collect and analyze soils from fields used for manure or process wastewater application at least once every four years. Sampling of manure, process wastewater and soils shall be done in accordance with s. NR 243.19(1)(c)."

According to the facility's Snap-Plus Soil Test Report, the facility did not collect the appropriate number of soil samples for some of the land application fields.

The facility has not sampled land applied manure at the required frequency.

According to Permit Section 2.5 Runoff Control System- Installation, by July 1, 2013, the facility is to "Complete the suggested improvements in the January 21, 2013 letter from REA Engineering to Calamity Knoll Farm and continue to operate and maintain the runoff control systems for each of the feedlots at the main farm to maintain a no discharge system."

The facility did not implement the runoff control system measures as described in the January 21, 2013 letter. For instance, the facility did not reconstruct curb walls at the Cow Palace and maintain stormwater ditches and culverts around the Cow Palace and Hartgarten Barn. The facility did not have straw bales as runoff controls to detain and filter runoff from the Gilt Shed, Bruce Barn, and Robbie's Pen.

According to Permit Section 3.2.4 Mortality Management, "Animal carcasses may not be disposed of in a manner that results in a discharge of pollutant to surface water . . . containment, storage or treatment facility is adequately designed to contain and treat carcasses and the facility has been approved by the department for that use."

The facility operated a compost pile for animal carcasses. The compost pile was not contained in an approved structure. The facility did not have an operation, monitoring, or inspection plan for the compost pile. The compost pile did not have containment for process wastewater that may be generated at the pile. The placement of the compost pile was situated such that runoff or process wastewater generated at the compost pile could flow to Spring Brook.

LIST OF ATTACHMENTS

1. Overview Maps
2. Inspection Photographs
3. Field Sampling Results

Attachment 1: Overview Maps

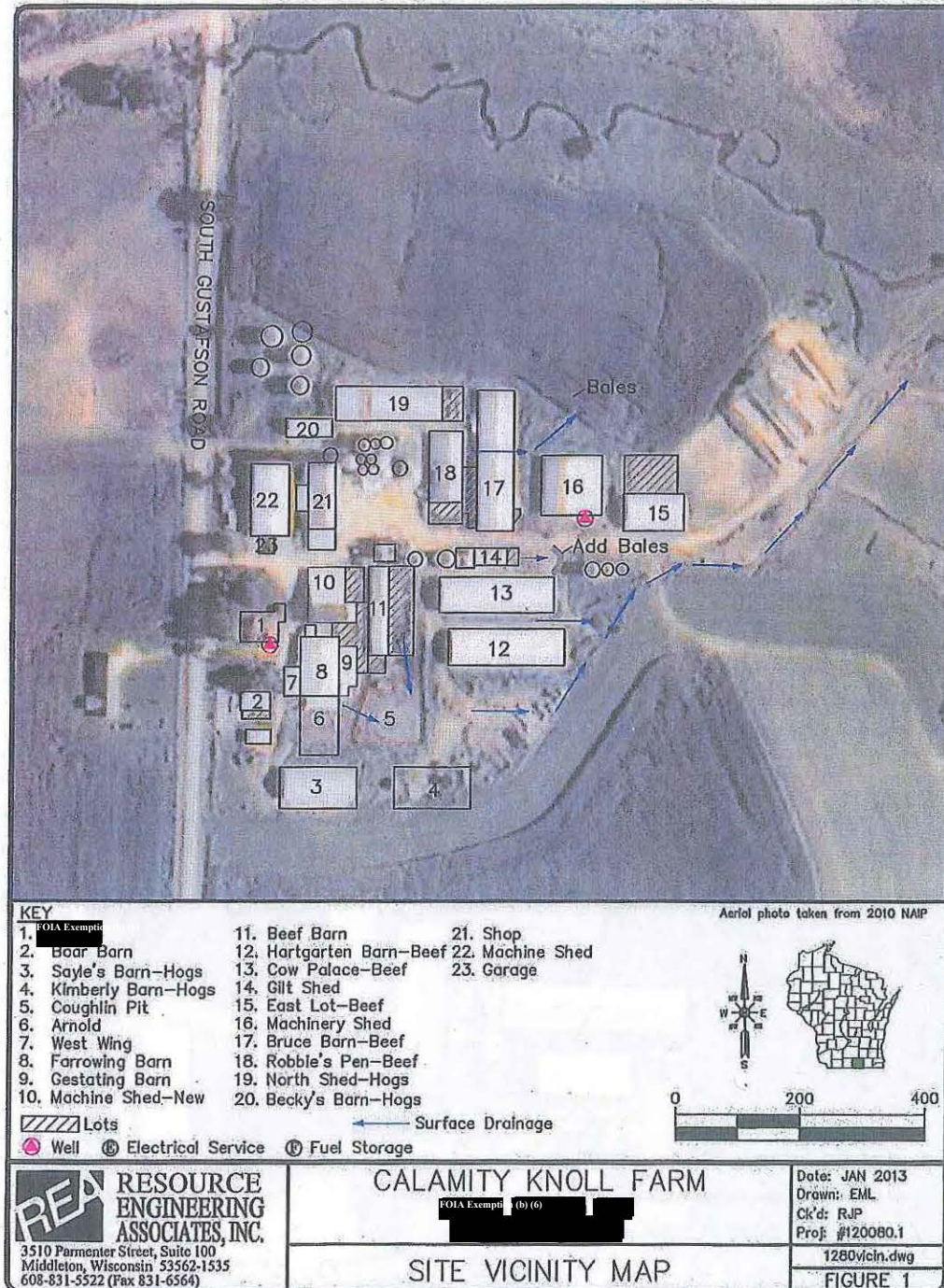


FIGURE 1: REA Site Vicinity Map

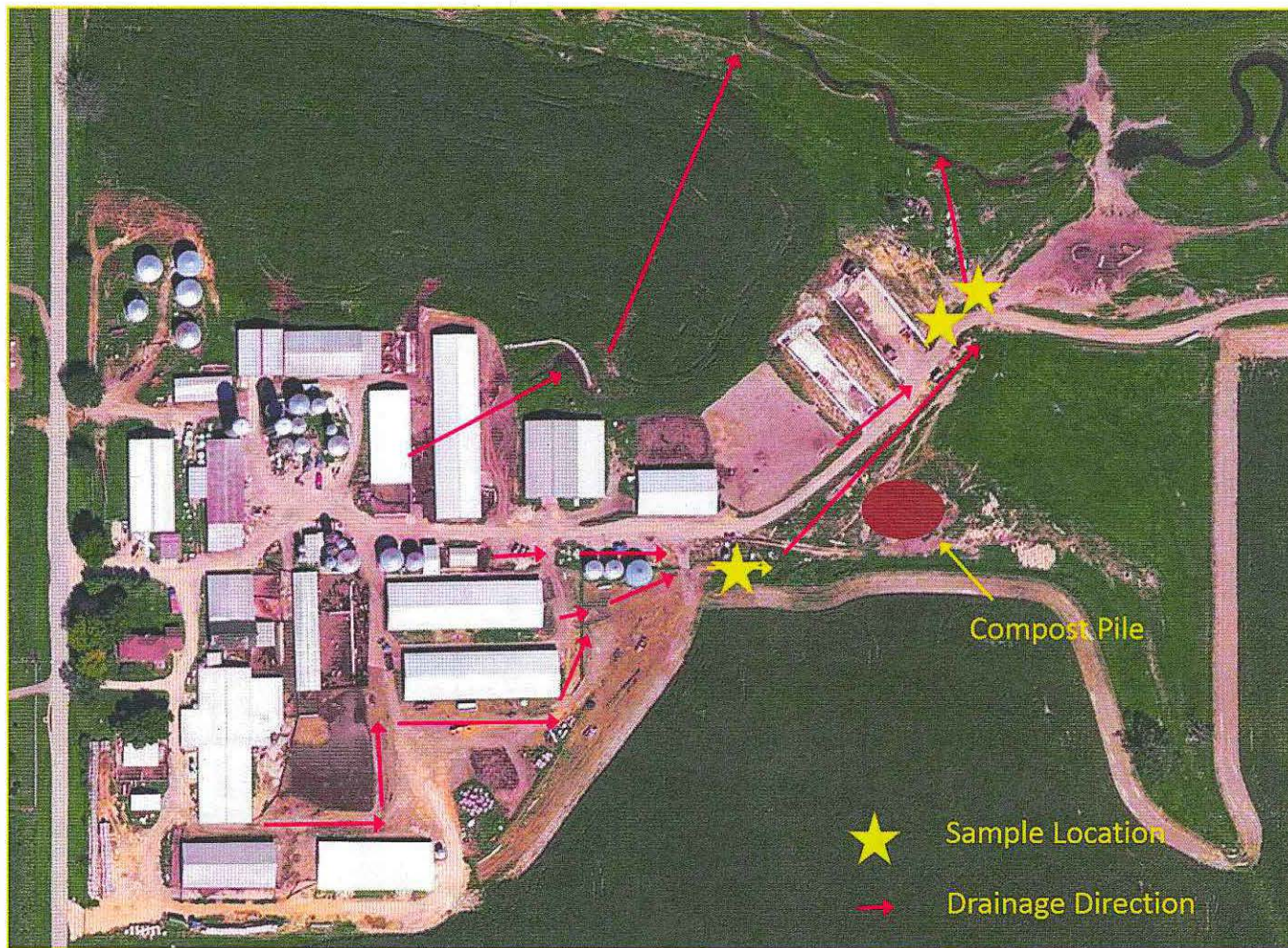


Figure 2: Calamity Knoll: Sample Locations and Drainage Directions

Attachment 2
Calamity Knolls Farm
EPA Inspection April 24, 2014



1: IMGP0627

Description: The Coughlin Pit, Hartgarten Barn and Cow Palace Barn can be seen in the background.

Location: Between Sayle's Barn and Arnold

Camera Direction: Northeast



2: IMGP0628

Description: The animal walkway contained some manure and drained toward the east.

Location: Between Sayle's Barn and Arnold

Camera Direction: East



3: IMGP0629

Description: The topography of this area is such that surface flow from the animal walkway and roof runoff drains through a pathway east along the south side of the Coughlin Pit and then north along the east end of the Coughlin Pit. Irrigation pipes were set up for pumping from the Coughlin Pit.

Location: Southwest of the Coughlin Pit

Camera Direction: West



4: IMGP0630

Description: Drainage pathway flows north. There was dead vegetation throughout the pathway.

Location: East side of the Coughlin Pit

Camera Direction: North



5: IMGP0631

Description: The water in the pathway was dark and septic.

Location: Southeast corner of Coughlin Pit

Camera Direction: Down



6: IMGP0632

Description: The pathway continued north along the Coughlin Pit before connecting through a culvert under the access road that outlet near the southwest end of the Hartgarten Barn.

Location: Northeast of Coughlin Pit

Camera Direction: West



7: IMGP0633

Description: The pathway continued east along the south side of the Hartgarten Barn. There was dead vegetation throughout the pathway.

Location: Southwest of Hartgarten Barn

Camera Direction: East



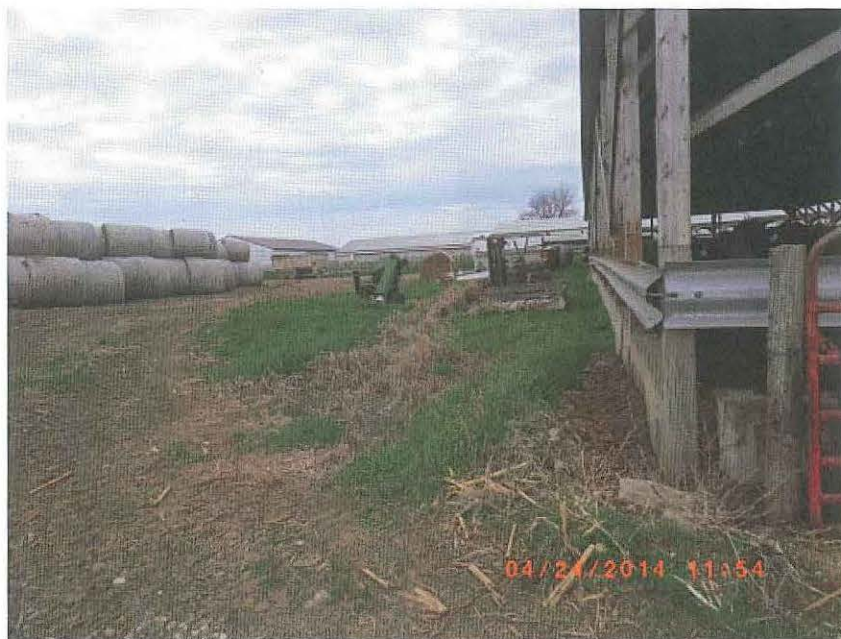
FOIA Exemption (b) (6)

8: IMGP0634

Description: The topography of the area was sloped such that drainage from along the south end of the Hartgarten Barn flowed through a vegetated area to the east of Hartgarten Barn.

Location: East side of Hartgarten Barn

Camera Direction: North



9: IMGP0635

Description: Drainage pathway along south end of Hartgarten Barn. There was dead vegetation throughout the pathway.

Location: Southeast end of Hartgarten Barn

Camera Direction: West



10: IMGP0636

Description: The topograph of the area was sloped such that drainage from along the south end of the Hartgarten Barn and from between the Hartgarten and Cow Palace Barn drained through a vegetated area to the east of Hartgarten Barn.

Location: East of Hartgarten Barn

Camera Direction: Northeast

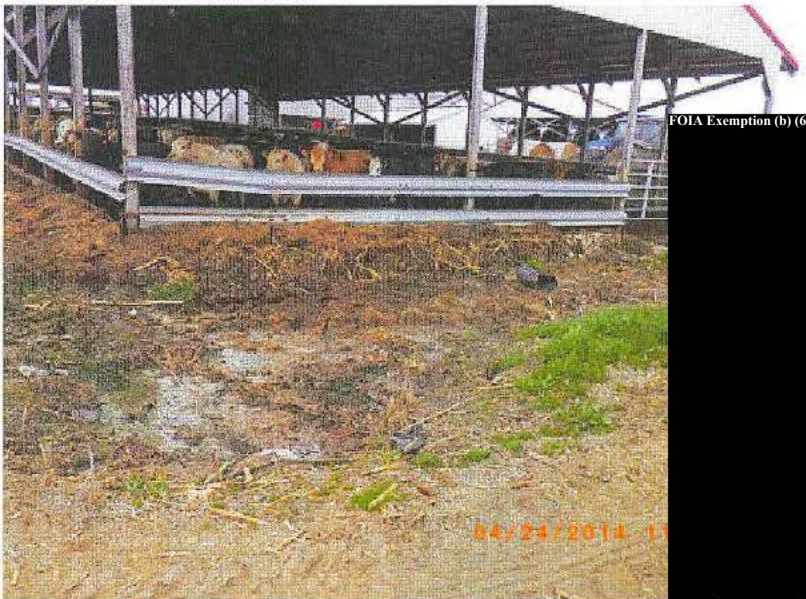


11: IMGP0637

Description: A culvert near the southeast end of the Cow Palace Barn drains the area around the Cow Palace Barn to the east. There was a berm around the perimeter of the barn. The berm contained manure and bedding. Manure and bedding were observed on the ground around the intake of the culvert.

Location: Southeast corner of Cow Palace Barn

Camera Direction: West



12: IMGP0638

Description: A culvert near the southeast end of the Cow Palace Barn drains the area around the Cow Palace Barn to the east. There was a berm around the perimeter of the barn. The berm contained manure and bedding. Manure and bedding were observed on the ground around the intake of the culvert.

Location: Southeast corner of Cow Palace Barn

Camera Direction: Down



13: IMGP0639

A culvert near the southeast end of the Cow Palace Barn drains the area around the Cow Palace Barn to the east. There was a berm around the perimeter of the barn. The berm contained manure and bedding. Manure and bedding were observed on the ground around the intake of the culvert.

Location: Southeast corner of Cow Palace Barn

Camera Direction: Down



14: IMGP0640

Description: The culvert runs under the access roadway and outlets to a grassed area east of the Cow Palace. Manure and bedding solids were observed around the culvert outlet and into the pathway through the grassed area.

Location: East of Cow Palace

Camera Direction: East



15: IMGP0641

Description: The culvert runs under the access roadway and outlets to a grassed area east of the Cow Palace. Manure and bedding solids were observed around the culvert outlet and into the pathway through the grassed area.

Location: East of Cow Palace

Camera Direction: East



16: IMGP0642

Description: The culvert runs under the access roadway and outlets to a grassed area east of the Cow Palace. Manure and bedding solids were observed around the culvert outlet and into the pathway through the grassed area.

Location: East of Cow Palace

Camera Direction: East



17: IMGP0643

Description: Manure and bedding solids were observed throughout the east end of the Cow Palace and into the pathway through the grassed area.

Location: East of Cow Palace

Camera Direction: North



18: IMGP0644

Description: Open lots for pigs is sloped such that it drains to the east.

Location: Northeast of Cow Palace

Camera Direction: West



19: IMGP0645

Description: Open lots for pigs is sloped such that it drains to the east.

Location: Northeast of Cow Palace

Camera Direction: West



20: IMGP0646

Description: Manure and process wastewater was observed east of the Bruce Barn. This area is sloped such that drainage would flow northeast through the field to Spring Brook. There was no containment system for this manure and process wastewater.

Location: East of Bruce Barn

Camera Direction: Down/South



21: IMGP0647

Description: Manure and process wastewater from the Bruce Barn to the east. This area is sloped such that drainage would continue to flow northeast through the field to Spring Brook.

Location: East of Bruce Barn

Camera Direction: South



22: IMGP0648

Description: The manure solids can be seen in the area east of the Bruce Barn. Mr. [REDACTED] said that they have put round bails in the field northeast of the Bruce Barn to reduce the solids in stormwater that flowed from the areas east of the Bruce Barn. There were no round bails in the field during the inspection.

Location: East of the Bruce Barn

Camera Direction: East



23: IMGP0649

Description: Manure and bedding were pushed out on the North side of the Bruce Barn.

Location: North of the Bruce Barn

Camera Direction: Southeast



24: IMGP0650

Description: Pile of manure stacked west of the Bruce Barn. Open lots drained to the east.

Location: Northwest corner of Bruce Barn

Camera Direction: South



25: IMGP0651

Description: Cattle on pasture had direct access to Spring Brook.

Location: Field north of facility

Camera Direction: North



FOIA Exemption (b) (6)

26: IMGP0652

Description: The bunker feed storage area drained through a pipe to an underground tank. The tank was full during the inspection. Any additional process wastewater flow to the tank would cause an overflow and flow east and then north to Spring Brook. The tire marks the inlet of the underground tank.

Location: Southeast of Feed bunkers

Camera Direction: Down



27: IMGP0653

Description: The bunker feed storage area drained through a pipe to an underground tank. The tank was full during the inspection. Any additional process wastewater flow to the tank would cause an overflow and flow east and then north to Spring Brook. The tire marks the inlet of the underground tank.

Location: Southeast of Feed bunkers

Camera Direction: Down



28: IMGP0654

Description: The feed storage bunkers drain east through this area that did not have any vegetation.

Location: East of the feed bunkers.

Camera Direction: Northeast



29: IMGP0655

Description: The drainage pathways along the south and east end of the facility eventually drains through this culvert and then through a gulley to Spring Brook.

Location: East of Feed Bunkers

Camera Direction: South



30: IMGP0656

Description: The drainage pathways along the south and east end of the facility eventually drains through this culvert and then through a gulley to Spring Brook.

Location: East of Feed Bunkers

Camera Direction: South



31: IMGP0657

Description: The gully drains north to Spring Brook.

Location: East of the Feed Bunkers.

Camera Direction: North



32: IMGP0658

Description: A compost pile was observed south of the Feed Bunkers.

Location: East of Feed Bunkers

Camera Direction: South



33: IMGP0659

Description: The tank that contains process wastewater from the feed bunkers is under the tires. The overflow of process wastewater from the tank would flow northeast through this unvegetated area to the gulley.

Location: Northeast of Feed Bunkers.

Camera Direction: Southwest



34: IMGP0660

Description: The gulley drains north to Spring Brook.

Location: East of the Feed Bunkers.

Camera Direction: North



35: IMGP0661

Description: The culvert that drains the south and east side of the facility goes under this access way.

Location: Southeast of Feed Bunkers

Camera Direction: Northeast



36: IMGP0662

Description: Waste feed southeast of Feed Bunkers. The culvert inlet that drains the south and east sides of the facility is located in the field.

Location: Southeast of Feed Bunkers

Camera Direction: East



37: IMGP0663

Description: Process wastewater from the Feed Bunker is drained through a four inch PVC pipe to an underground tank that was full during the inspection.

Location: Feed Bunker

Camera Direction: North



38: IMGP0664

Description: The feed bunker stored corn.

Location: Feed Bunker

Camera Direction: North



39: IMGP0665

Description: Feed lot is sloped such that surface drainage flows east. Manure and feed waste were observed on the East side of the open lot.

Location: East Lot

Camera Direction: North



40: IMGP0666

Description: A drainage pathway from the East Lot is sloped to the east.

Location: East Lot

Camera Direction: East



41: IMGP0667

Description: The mortality compost pile can be observed in the background. The mortality compost pile was not covered. Feed was observed on the ground.

Location: South of the Feed Bunkers.

Camera Direction: South



42: IMGP0668

Description: The mortality compost pile can be observed in the background. The mortality compost pile was not covered. Process wastewater from the compost pile had no containment.

Location: South of the Feed Bunkers.

Camera Direction: South

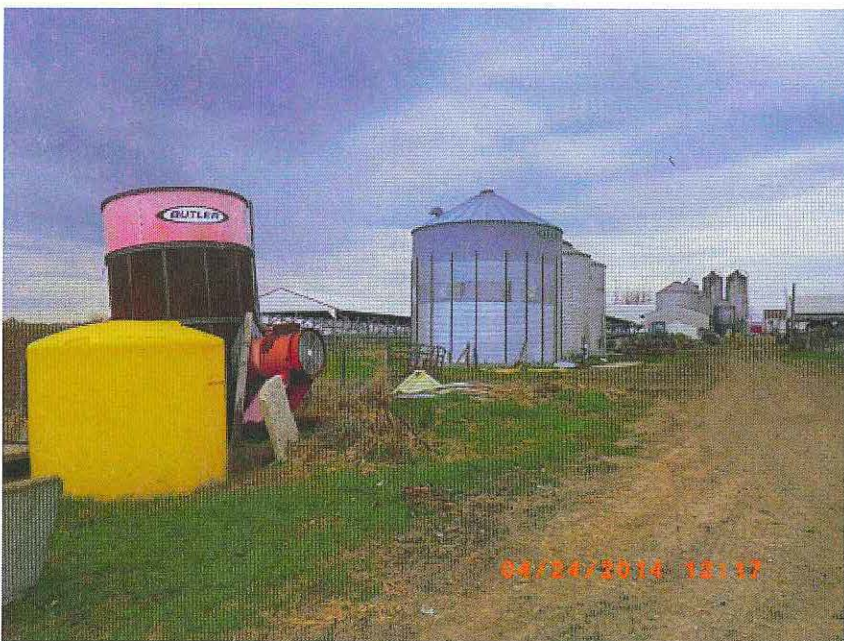


43: IMGP0669

Description: Access way with East lot on the left.

Location: South of East lot

Camera Direction: Northeast



44: IMGP0670

Description: Grain bins along the access road.

Location: South of East Lot

Camera Direction: West

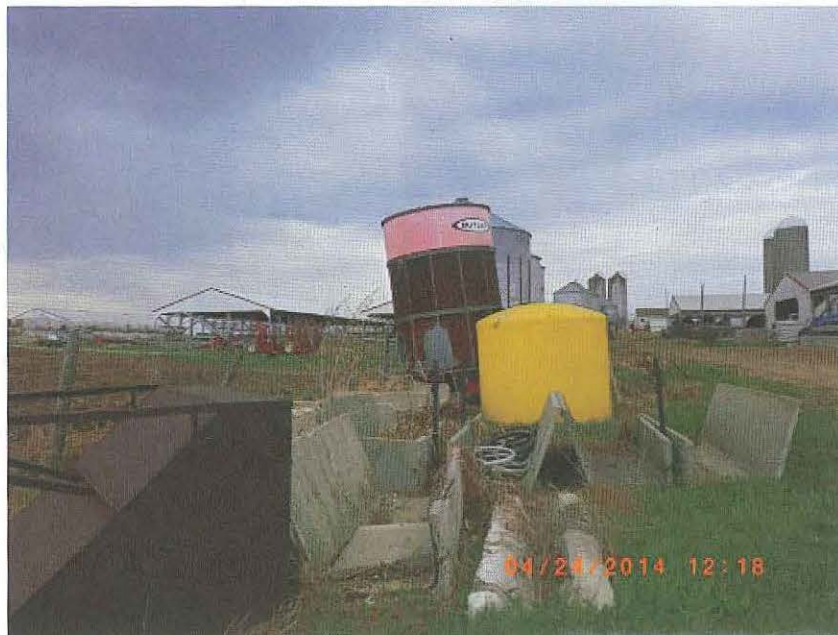


45: IMGP0671

Description: Drainage pathway flows east through this area.

Location: South of East lot.

Camera Direction: South



46: IMGP0672

Description: Equipment storage along drainage pathway.

Location: South of East Lot

Camera Direction: West



47: IMGP0673

Description: Mortality compost pile is located in the background. The mortality compost pile was not covered. Process wastewater from the compost pile had no containment.

Location: South of East Lot

Camera Direction: South



48: IMGP0674

Description: Surface drainage flows east through this grassed area around the grain bins. Vegetation was dead throughout the pathway. Manure solids were observed throughout the pathway.

Location: East of Cow Palace

Camera Direction: West



49: IMGP0675

Description: The surface drainage from the grassed area drains through a culvert under the access road and continues east through a pathway.

Location: East of Cow Palace

Camera Direction: East



50: IMGP0676

Description: The pathway contained manure solids and was dark in color. It smelled of manure.

Location: South of East Lot

Camera Direction: Down



51: IMGP0677

Description: The pathway continues east through this area. Mortality compost pile is located in the background. The mortality compost pile was not covered. Process wastewater from the compost pile had no containment.

Location: South of East Lot

Camera Direction: East



52: IMGP0678

Description: Surface drainage continues east through this area. Mortality compost pile is located in the background. The mortality compost pile was not covered. Process wastewater from the compost pile had no containment.

Location: South of East Lot

Camera Direction: East



53: IMGP0679

Description: Mortality compost pile is located in the background. The mortality compost pile was not covered. Process wastewater from the compost pile had no containment.

Location: South of East Lot

Camera Direction: East



54: IMGP0680

Description: Surface drainage continues east through this area.

Location: South of East Lot

Camera Direction: East



55: IMGP0681

Description: Water in the pathway was black and smelled like manure.

Location: South of East Lot

Camera Direction: Down



56: IMGP0682

Description: Culvert outlets into pathway.

Location: South of East Lot

Camera Direction: Down

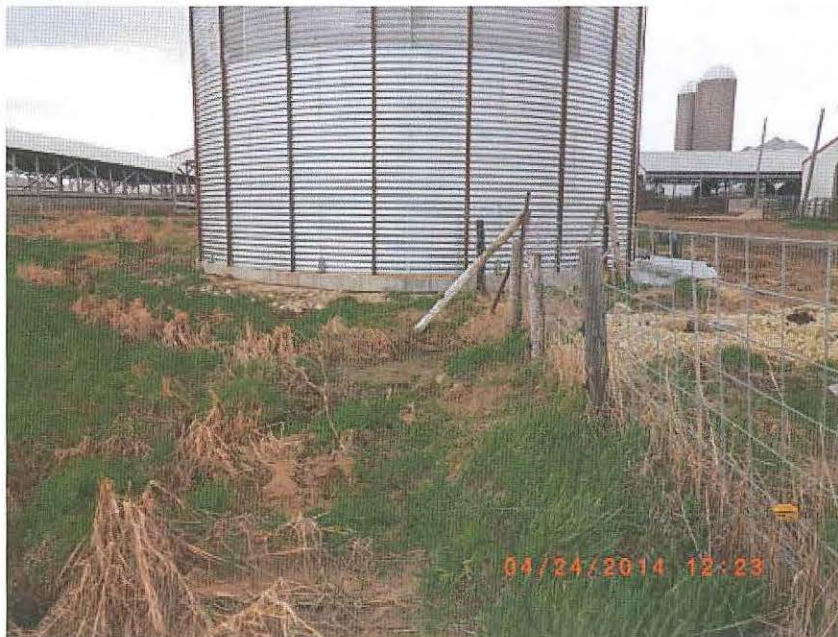


57: IMGP0683

Description: The water at inlet of culvert that drained under the access road to the south was black and smelled like manure.

Location: South of East Lot

Camera Direction:



58: IMGP0684

Description: Surface drainage flows east through this grassed area around the grain bins. Vegetation was dead throughout the pathway. Manure solids were observed throughout the pathway.

Location: East of Cow Palace

Camera Direction: West



59: IMGP0685

Description: Manure solids were observed along the north end of the grain bins. This area drains east.

Location: North of grain bins.

Camera Direction: East

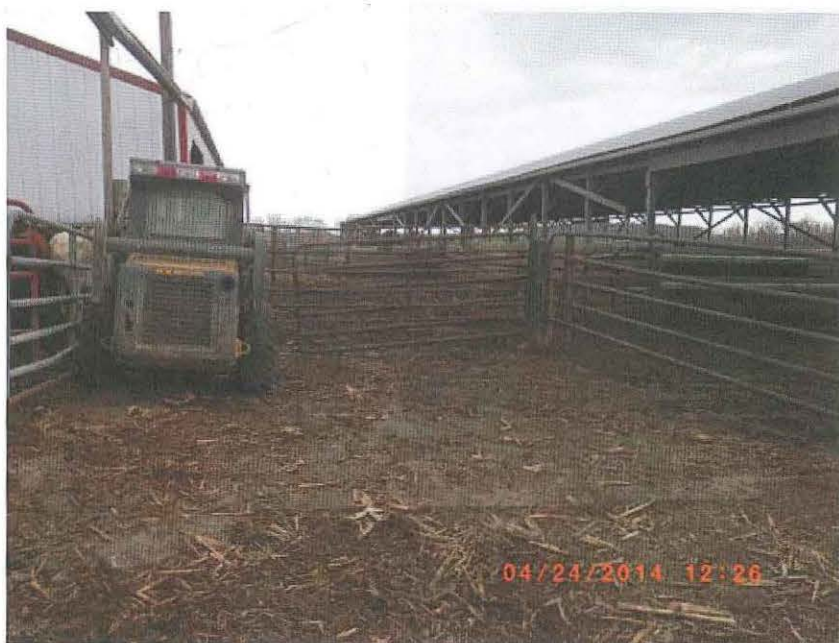


60: IMGP0686

Description: Manure solids and bedding solids were observed in the area east of the Gilt Shed.

Location: East of Gilt Shed

Camera Direction: South

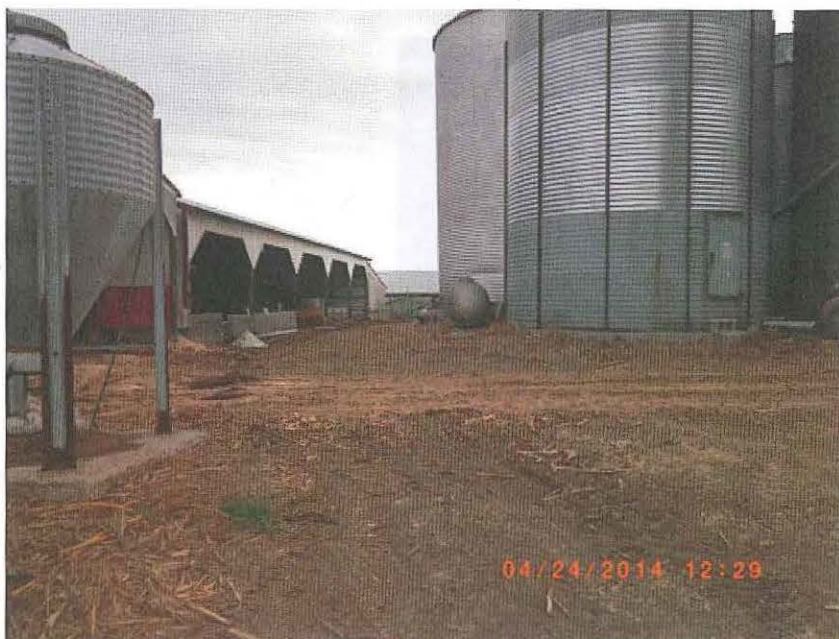


61: IMGP0687

Description: Open lot area slopes toward the northeast.

Location: Between Robbie's Pen and Bruce Barn

Camera Direction: North



62: IMGP0688

Description: Access way south of North Shed.

Location: South of Becky's Barn

Camera Direction: East



63: IMGP0689

Description: Sample S01 taken of water in drainage pathway. The water was dark and smelled of manure.

Location: South of East Lot

Camera Direction: Down



64: IMGP0690

Description: Sample S01 taken of water in drainage pathway. The water was dark and smelled of manure.

Location: South of East Lot

Camera Direction: Down



65: IMGP0691

Description: Sample S02 taken in gulley on north east end of the facility. The gulley is downstream of the drainage pathway.

Location: East of the Feed Bunkers

Camera Direction: Down



66: IMGP0692

Description: Sample S02 taken in gulley on north east end of the facility. The gulley is downstream of the drainage pathway.

Location: East of the Feed Bunkers

Camera Direction: Down



67: IMGP0693

Description: The gully drains to Spring Brook.

Location: East of the Feed Bunkers

Camera Direction: North



68: IMGP0694

Description: The gully drains to Spring Brook.

Location: East of the Feed Bunkers

Camera Direction: North



69: IMGP0695

Description: Sample S03 taken from underground tank that accepts drainage from the Feed Bunkers. The water was dark and smelled septic.

Location: East of Feed Bunkers

Camera Direction: Down



70: IMGP0696

Description: Sample S03 taken from underground tank that accepts drainage from the Feed Bunkers. The water was dark and smelled septic.

Location: East of Feed Bunkers

Camera Direction: Down

LYONS LAB

9795 U.S. Route 20 East • Stockton, IL 61085 * 815-947-

Kimberly O' Niell
Leidos Attn: Kimberly O'Neill
124 W. Cliff St.
SOMERVILLE, NJ 08876

Home Owner Calamity Knoll Farms
Well ID/Address S01
Well City
Lab # 14674
Sample Type Non Drinking Water
Collection Date 4/24/2014

Report Date 29-Apr-14

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Organic Coliform									
E-coli - Fecal Coliforms	16'690	CFU	1	1	1	4/29/2014	9223 Colert 18	SNL	1

LOD Limit of Detection

None Detected = Result was less than the LOD

LOQ Limit of Quantitation

Code

Comment

1

All laboratory QC requirements were met for this sample.

Laboratory Director

Jennifer Jordan

LYONS LAB

9795 U.S. Route 20 East • Stockton, IL 61085 * 815-947-

Kimberly O' Niell
Leidos Attn: Kimberly O'Neill
124 W. Cliff St.
SOMERVILLE, NJ 08876

Home Owner Calamity Knoll Farms
Well ID/Address S02
Well City ,
Lab # 14675
Sample Type Non Drinking Water
Collection Date 4/24/2014

Report Date 29-Apr-14

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Organic Coliform									
E-coli - Fecal Coliforms	100	CFU	1	1	1	4/29/2014	9223 Colert 18	SNL	1

LOD Limit of Detection

None Detected = Result was less than the LOD

LOQ Limit of Quantitation

Code

Comment

1

All laboratory QC requirements were met for this sample.

Laboratory Director

Jennifer Jordan

Please visit our website www.lyons4water.com

EPA ID # 17589 WI DNR Certification # 105010109

Page 1 of 1

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9795 U.S. Route 20 East • Stockton, IL 61085 * 815-947-

Kimberly O' Niell
Leidos Attn: Kimberly O'Neill
124 W. Cliff St.
SOMERVILLE, NJ 08876

Home Owner Calamity Knoll Farms
Well ID/Address S03
Well City ,
Lab # 14676
Sample Type Non Drinking Water
Collection Date 4/24/2014

Report Date 29-Apr-14

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Organic Coliform									
E-coli - Fecal Coliforms	1'890	CFU	1	1	1	4/29/2014	9223 Colert 18	SNL	1

LOD Limit of Detection

None Detected = Result was less than the LOD

LOQ Limit of Quantitation

Code

1

Comment

All laboratory QC requirements were met for this sample.

Laboratory Director

Jennifer Jordan



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605



LABORATORY
ACCREDITATION
BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2285 Testing

Date: 5/21/2014
Subject: Review of Region 5 Data for Calamity Knoll Farms
From: Colin Breslin, Chemist
Region 5 Chicago Regional Laboratory
To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

CB 5/21/14

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Calamity Knoll Farms

Data Management Coordinator and Date Received

Date Transmitted: ____/____/____

Analyses included in this report:

BOD



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-21-14 12:50

Analysis Case Narrative

General Information

Four water samples for the analysis of 5-day biochemical oxygen demand (BOD5) were received at the Chicago Regional Laboratory (CRL) on April 25, 2014. All samples were analyzed within the 48 hour hold time. The designated analyst, Colin Breslin, can be reached at 312-886-2912.

Sample Analysis and Results

The samples were prepared and analyzed according to CRL SOP AIG006, Revision No: 4.0 (SM 5210B) and an approved CRL Pen&Ink Change (Reference No: AIG006 R4.0 - PI01). All sample results were flagged "J - The identification of the analyte is acceptable; the reported value is an estimate". See below under Quality Control for an explanation.

Quality Control

All Quality Control (QC) audits were within CRL limits for the requested analytes or did not result in qualification of the data, except for the following:

Laboratory Control Samples - Glucose-Glutamic acid (GGA) Solution:

One GGA check standard passed and one failed the lower control limit of 84.6%. The GGA check standards were recovered at 93.2% and 58.1%. One acceptable and one failed GGA solution below the lower control limit suggests a weak and/or non-homogenous seed solution. The results for all samples were flagged "J" because of this QC deficiency.

CB 5/21/14

Colin Breslin, Chemist



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



**LABORATORY
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Certificate # L2286 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-21-14 12:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1404015-01	Water	Apr-24-14 13:15	Apr-25-14 10:15
S02	1404015-02	Water	Apr-24-14 13:25	Apr-25-14 10:15
S03	1404015-03	Water	Apr-24-14 13:40	Apr-25-14 10:15
B01	1404015-04	Water	Apr-24-14 13:00	Apr-25-14 10:15

BOD, 5 day, SM 5210 B (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1404015-01) Water Sampled: Apr-24-14 13:15 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	370	J		2	mg/L	1	B404080	Apr-25-14	Apr-25-14

S02 (1404015-02) Water Sampled: Apr-24-14 13:25 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	6	J		2	mg/L	1	B404080	Apr-25-14	Apr-25-14

S03 (1404015-03) Water Sampled: Apr-24-14 13:40 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	4200	J		2	mg/L	1	B404080	Apr-25-14	Apr-25-14

B01 (1404015-04) Water Sampled: Apr-24-14 13:00 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	U	J		2	mg/L	1	B404080	Apr-25-14	Apr-25-14

CB 5/21/14
Colin Breslin, Chemist



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



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Certificate # L2280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-21-14 12:50

Notes and Definitions

J The identification of the analyte is acceptable; the reported value is an estimate.
U Not Detected
NR Not Reported

CB 5/21/14

Colin Breslin, Chemist



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605



LABORATORY
ACCREDITATION
BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2280 Testing

Date: 5/19/2014
Subject: Review of Region 5 Data for Calamity Knoll Farms
From: Laurence Wong, Analyst
Region 5 Chicago Regional Laboratory
To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Calamity Knoll Farms

Data Management Coordinator and Date Received

Date Transmitted: ____/____/____

Analyses included in this report:

Solids, TSS



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



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Certificate # L2280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-19-14 17:43

ANALYSIS CASE NARRATIVE

Analyst Phone number: 312-353-8418

General Information

Four (4) samples under Work Order #1404015 were received on April 25, 2014 for Total Suspended Solids (TSS) analysis. The sample holding time limit was met. The designated analyst for these samples was Laurence Wong (phone number: 312-353-8418). Other pertinent information is provided in the final analysis report.

Sample Analysis and Results

The sample preparation and analysis followed procedure CRL SOP AIG018 r4.0 (Standard Method 2540 D). They began on April 29, 2014 and were completed on April 30, 2014. All the samples were kept in refrigerator at $\leq 6^{\circ}\text{C}$ at all time except when in use.

Quality Control

All quality control (QC) audits followed CRL guidelines. The required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits.

Signature Laurence Wong, Date May 19th, 2014

Laurence Wong, Analyst



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



**LABORATORY
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ACCREDITED ISO/IEC 17025

Certificate # L2280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-19-14 17:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1404015-01	Water	Apr-24-14 13:15	Apr-25-14 10:15
S02	1404015-02	Water	Apr-24-14 13:25	Apr-25-14 10:15
S03	1404015-03	Water	Apr-24-14 13:40	Apr-25-14 10:15
B01	1404015-04	Water	Apr-24-14 13:00	Apr-25-14 10:15

**Total Suspended Solids, SM 2540 D (modified)
US EPA Region 5 Chicago Regional Laboratory**

S01 (1404015-01) Water Sampled: Apr-24-14 13:15 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	320			5	mg/L	1	B404079	Apr-29-14	Apr-29-14

S02 (1404015-02) Water Sampled: Apr-24-14 13:25 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	53			5	mg/L	1	B404079	Apr-29-14	Apr-29-14

S03 (1404015-03) Water Sampled: Apr-24-14 13:40 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	422			5	mg/L	1	B404079	Apr-29-14	Apr-29-14

B01 (1404015-04) Water Sampled: Apr-24-14 13:00 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	U			5	mg/L	1	B404079	Apr-29-14	Apr-29-14



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
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**LABORATORY
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Certificate # L2280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-19-14 17:43

Notes and Definitions

U Not Detected

NR Not Reported



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605



LABORATORY
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ACCREDITED ISO/IEC 17025

Certificate # L2230 Testing

Date: 5/19/2014

Subject: Review of Region 5 Data for Calamity Knoll Farms

From: Laurence Wong, Analyst
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Calamity Knoll Farms

Data Management Coordinator and Date Received

Date Transmitted: / /

Analyses included in this report:

Solids, TDS



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



**LABORATORY
ACCREDITATION
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ACCREDITED ISO/IEC 17025
Certificate # L2289 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-19-14 17:33

ANALYSIS CASE NARRATIVE

Analyst Phone number: 312-353-8418

General Information

Four (4) samples under Work Order #1404015 were received on April 25, 2014 for Total Dissolved Solids (TDS) analysis. The sample holding time limit was met. The designated analyst for these samples was Laurence Wong (phone number: 312-353-8418). Other pertinent information is provided in the final analysis report.

Sample Analysis and Results

The sample preparation and analysis followed procedure CRL SOP AIG017 r5.0 (Standard Method 2540 C). They began on April 29, 2014 and were completed on May 1, 2014. The samples were kept in refrigerator at $\leq 6^{\circ}\text{C}$ at all time except when needed for the analysis.

Quality Control

All quality control (QC) audits followed CRL guidelines. The required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits.

Signature

Laurence Wong

, Date

May 19th, 2014



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



**LABORATORY
ACCREDITATION
BUREAU**
ACCREDITED ISO/IEC 17025
Certificate # L2280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-19-14 17:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1404015-01	Water	Apr-24-14 13:15	Apr-25-14 10:15
S02	1404015-02	Water	Apr-24-14 13:25	Apr-25-14 10:15
S03	1404015-03	Water	Apr-24-14 13:40	Apr-25-14 10:15
B01	1404015-04	Water	Apr-24-14 13:00	Apr-25-14 10:15

Dissolved Solids, SM 2540C (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1404015-01) Water Sampled: Apr-24-14 13:15 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	1530			20.0	mg/L	1	B404078	Apr-29-14	Apr-29-14

S02 (1404015-02) Water Sampled: Apr-24-14 13:25 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	476			20.0	mg/L	1	B404078	Apr-29-14	Apr-29-14

S03 (1404015-03) Water Sampled: Apr-24-14 13:40 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	3760			20.0	mg/L	1	B404078	Apr-29-14	Apr-29-14

B01 (1404015-04) Water Sampled: Apr-24-14 13:00 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	U			20.0	mg/L	1	B404078	Apr-29-14	Apr-29-14

LW 5/19/14
Laurence Wong, Analyst



Environmental Protection Agency Region 5
Chicago Regional Laboratory

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**LABORATORY
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ACCREDITED ISO/IEC 17025
Certificate # L2280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-19-14 17:33

Notes and Definitions

U Not Detected

NR Not Reported

LW 5/19/14

Laurence Wong, Analyst



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605



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Certificate # L2283 Testing

Date: 5/23/2014

Subject: Review of Region 5 Data for Calamity Knoll Farms

From: Anna Knoebel, Chemist *AK*
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Calamity Knoll Farms

Data Management Coordinator and Date Received

Date Transmitted: ____/____/____

Analyses included in this report:

Ammonia N DA, Distilled

Nitrate-Nitrite N DA



Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-23-14 14:25

ANALYSIS CASE NARRATIVE – Distilled Ammonia Nitrogen in Water

Work Order: 1404015
Analyst: Anna Knoebel
Phone #: (312) 353-9467

General Information

Four water samples for Ammonia Nitrogen were received on April 25, 2014. All holding times were met. Sample 1404015-04 (B01) was not preserved in the field on April 24, 2014 as required for Ammonia Nitrogen to $\text{pH} \leq 2$. The sample was preserved to $\text{pH} \leq 2$ at the laboratory on April 25, 2014. The sample result was flagged "J" (estimated) for improper preservation. The refrigerator that was housing the samples malfunctioned over the weekend of May 3 – 4, 2014 with the storage temperature reaching 9.4 °C. The samples results for the entire work order were flagged "J" (estimated) due to the temperature exceeding the storage requirement of ≤ 6 °C.

Sample Analysis and Results

The samples were distilled and analyzed on May 13, 2014 for Ammonia Nitrogen in water using CRL SOP AIG029B, Revision # 0 (Reference Method, Standard Method 4500 – NH₃ – B & G). The samples were stored in the refrigerator at all times, except when in use.

Quality Control

Matrix Spike (MS)

The matrix spike recovery for sample 1404015-01 (S01) was below the acceptance limit (80 – 120 %). The blank spike (BS) recovery (103 %) and other QC audits were within the CRL limits. The sample and spike were diluted 10 fold. As a result the spike concentration was diluted out. No flags were used on this basis.

All other quality control audits were within CRL limits or did not result in qualification of the data.

ANALYSIS CASE NARRATIVE – Nitrate-Nitrite Nitrogen in Water

Work Order: 1404015
Analyst: Anna Knoebel
Phone #: (312) 353-9467



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Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
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Certificate # L2280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-23-14 14:25

General Information

Four water samples for Nitrate-Nitrite Nitrogen were received on April 25, 2014. All holding times were met. Sample 1404015-04 (B01) was not preserved in the field on April 24, 2014 as required for Nitrate-Nitrite Nitrogen to $\text{pH} \leq 2$. The sample was preserved to $\text{pH} \leq 2$ at the laboratory on April 25, 2014. The sample result was flagged "J" (estimated) for improper preservation. The refrigerator that was housing the samples malfunctioned over the weekend of May 3 – 4, 2014 with the storage temperature reaching 9.4 °C. The samples results for the entire work order were flagged "J" (estimated) due to the temperature exceeding the storage requirement of ≤ 6 °C.

Sample Analysis and Results

The samples were analyzed for Nitrate-Nitrite Nitrogen in water on May 8 – 9, 2014 using CRL SOP AIG031A, Revision #1.1 (Standard Method 4500 – NO₃- E). The samples were stored in the refrigerator at all times except when in use. All samples except 1404015-04 (B01) were centrifuged prior to analysis to remove particulates.

Quality Control

All quality control audits were within CRL limits or did not result in qualification of the data

416 523-14

Anna Knoebel, Chemist



Environmental Protection Agency Region 5
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Certificate # L2280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-23-14 14:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1404015-01	Water	Apr-24-14 13:15	Apr-25-14 10:15
S02	1404015-02	Water	Apr-24-14 13:25	Apr-25-14 10:15
S03	1404015-03	Water	Apr-24-14 13:40	Apr-25-14 10:15
B01	1404015-04	Water	Apr-24-14 13:00	Apr-25-14 10:15

Amma Knoebel, Chemist

AK 523-H



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Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-23-14 14:25

Nitrate - Nitrite Nitrogen, SM 4500E (modified)

US EPA Region 5 Chicago Regional Laboratory

S01 (1404015-01) Water Sampled: Apr-24-14 13:15 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	0.09	J	0.09	0.25	mg/L	1	B405052	May-08-14	May-08-14

S02 (1404015-02) Water Sampled: Apr-24-14 13:25 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	12.8	J	0.09	0.25	mg/L	1	B405052	May-08-14	May-08-14

S03 (1404015-03) Water Sampled: Apr-24-14 13:40 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	U	J, U	0.09	0.25	mg/L	1	B405052	May-08-14	May-09-14

B01 (1404015-04) Water Sampled: Apr-24-14 13:00 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	U	J, U	0.09	0.25	mg/L	1	B405052	May-08-14	May-08-14

AL5-23-14

Anna Knoebel, Chemist



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Certificate # 12289 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-23-14 14:25

Ammonia Nitrogen, SM4500B & G (modified)

US EPA Region 5 Chicago Regional Laboratory

S01 (1404015-01) Water Sampled: Apr-24-14 13:15 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	23.1	++, J	0.60	2.00	mg/L	10	B405062	May-13-14	May-13-14

S02 (1404015-02) Water Sampled: Apr-24-14 13:25 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	0.18	++, J	0.06	0.20	mg/L	1	B405062	May-13-14	May-13-14

S03 (1404015-03) Water Sampled: Apr-24-14 13:40 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	176	++, J	3.00	10.0	mg/L	50	B405062	May-13-14	May-13-14

B01 (1404015-04) Water Sampled: Apr-24-14 13:00 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	U	++, J	0.06	0.20	mg/L	1	B405062	May-13-14	May-13-14

AK 5-23-14

Anna Knoebel, Chemist



Environmental Protection Agency Region 5
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Certificate # L2280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
May-23-14 14:25

Notes and Definitions

- J The identification of the analyte is acceptable; the reported value is an estimate.
- ++ CRL is not accredited for the marked test method and results.
- * This Quality Control measure meets the requirements of the CRL SOP for this analyte.
- U Not Detected
- NR Not Reported

AKC 5-23-14

Anna Knoebel, Chemist

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.12.2007
	Ammonia N DA, Distilled	(Water)	J-Flags used
	Ammonia N DA, Distilled	(Water)	Result calculations based on MDL
	Nitrate-Nitrite N DA	(Water)	J-Flags used
	Nitrate-Nitrite N DA	(Water)	Result calculations based on MDL
	Nitrate-Nitrite N DA	(Water)	U-Flags used
1404015-01	Ammonia N DA, Distilled	Ammonia as N	++: CRL is not accredited for the marked test method and results.
1404015-02	Ammonia N DA, Distilled	Ammonia as N	++: CRL is not accredited for the marked test method and results.
1404015-03	Ammonia N DA, Distilled	Ammonia as N	++: CRL is not accredited for the marked test method and results.
1404015-04	Ammonia N DA, Distilled	Ammonia as N	++: CRL is not accredited for the marked test method and results.
B405062-MS1	Ammonia N DA, Distilled	Ammonia as N	*: This Quality Control measure meets the requirements of the CRL SOP for this analyte.
B405062-MS1	Ammonia N DA, Distilled	Ammonia as N	Exceeds lower control limit
B405062-MS3	Ammonia N DA, Distilled	Ammonia as N	*: This Quality Control measure meets the requirements of the CRL SOP for this analyte.
B405062-MS3	Ammonia N DA, Distilled	Ammonia as N	Exceeds lower control limit



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CHICAGO, ILLINOIS 60605



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Certificate # L2280 Testing

Date: 6/10/2014

Subject: Review of Region 5 Data for Calamity Knoll Farms

From: Nidia Fuentes, Analyst *NF*
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Calamity Knoll Farms

Data Management Coordinator and Date Received

Date Transmitted: ____/____/____

Analyses included in this report:

TKN DA

Total Phosphorus DA



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
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**LABORATORY
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Certificate # L2283 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
Jun-10-14 10:28

Analysis Case Narrative

General Information

A total of four water samples to be analyzed for Total Phosphorus (TP) were received at the Chicago Regional Laboratory on April 25, 2014. All holding times were met. Samples required quality control (QC) reanalysis. But, the sample storage refrigerator malfunctioned before the QC reanalysis could be done. The malfunction of the refrigerator on May 3-4 caused the temperature to reach 9.4 degree C. The data will be flagged estimated "J" based on the storage temperature requirement. The designated analyst for the sample is Nidia Fuentes. Nidia can be reached at 312-353-9079.

Supportive data such as instrument raw data, reagents preparation sheet and miscellaneous items are filed with work order 1404006.

Sample Analysis and Results

The samples for TP were digested and analyzed using CRL SOP AIG034A, Revision # 3.7 (EPA method 365.4).

Quality Control

All quality control audits were within the CRL's limits, with the exception of sample matrix spike and situation mentioned above.

Matrix spike recovery for sample 1404015-01 (S01) did not meet the QC limits of 60% to 126%. Matrix spike recovery is invalid because the spike was diluted out. No flag will be applied under this circumstance.

Analysis Case Narrative

General Information

A total of four water samples to be analyzed for Total Kjeldahl Nitrogen (TKN) were received at the Chicago Regional Laboratory on April 25, 2014. All holding times were met. The designated analyst for these samples is Nidia Fuentes. Nidia can be reached at 312-353-9079.

Supportive data such as instrument raw data, reagents preparation sheet and miscellaneous items are filed with work order 1404006.

Nidia Fuentes
Nidia Fuentes, Analyst



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



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Certificate # L2280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
Jun-10-14 10:28

Sample Analysis and Results

The samples for TKN were digested and analyzed using CRL SOP AIG035A, Revision # 3.0 (EPA method 351.2).

Quality Control

All quality control audits were within the CRL's limits, with the exception of sample matrix spike.

Matrix spike recovery for sample 1404015-01 (S01) did not meet the QC limits of 41% to 165%. Matrix spike recovery is invalid because the spike was diluted out. No flag will be applied under this circumstance.

Nidia Fuentes

Nidia Fuentes, Analyst



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Certificate # 12280 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
Jun-10-14 10:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1404015-01	Water	Apr-24-14 13:15	Apr-25-14 10:15
S02	1404015-02	Water	Apr-24-14 13:25	Apr-25-14 10:15
S03	1404015-03	Water	Apr-24-14 13:40	Apr-25-14 10:15
B01	1404015-04	Water	Apr-24-14 13:00	Apr-25-14 10:15

Nidia Fuentes

Nidia Fuentes, Analyst



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Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
Jun-10-14 10:28

Phosphorus, Colorimetric, EPA 365.4 (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1404015-01RE1) Water Sampled: Apr-24-14 13:15 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	64.2	J		4.50	mg/L	30	B405068	May-19-14	May-20-14

S02 (1404015-02RE1) Water Sampled: Apr-24-14 13:25 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	0.30	J		0.15	mg/L	1	B405068	May-19-14	May-20-14

S03 (1404015-03RE1) Water Sampled: Apr-24-14 13:40 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	39.5	J		3.00	mg/L	20	B405068	May-19-14	May-20-14

B01 (1404015-04RE1) Water Sampled: Apr-24-14 13:00 Received: Apr-25-14 10:15

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	U	J		0.15	mg/L	1	B405068	May-19-14	May-20-14

Nidia Fuentes
Nidia Fuentes, Analyst



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Certificate # L2288 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
Jun-10-14 10:28

Total Kjeldahl Nitrogen, EPA 351.2 (modified)

US EPA Region 5 Chicago Regional Laboratory

S01 (1404015-01) Water Sampled: Apr-24-14 13:15 Received: Apr-25-14 10:15

Analyte	Result	Flags/ Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	97.7			12.5	mg/L	25	B404090	Apr-30-14	May-06-14

S02 (1404015-02) Water Sampled: Apr-24-14 13:25 Received: Apr-25-14 10:15

Analyte	Result	Flags/ Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	3.39			0.50	mg/L	1	B404090	Apr-30-14	May-06-14

S03 (1404015-03) Water Sampled: Apr-24-14 13:40 Received: Apr-25-14 10:15

Analyte	Result	Flags/ Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	369			10.0	mg/L	20	B404090	Apr-30-14	May-06-14

B01 (1404015-04) Water Sampled: Apr-24-14 13:00 Received: Apr-25-14 10:15

Analyte	Result	Flags/ Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	U			0.50	mg/L	1	B404090	Apr-30-14	May-06-14

Nidia Fuentes

Nidia Fuentes, Analyst



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Certificate # L2286 Testing

Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Calamity Knoll Farms
Project Number: 02DS2014
Project Manager: Don Schwer

Reported:
Jun-10-14 10:28

Notes and Definitions

J The identification of the analyte is acceptable; the reported value is an estimate.
U Not Detected
NR Not Reported

Nidia Fuentes

Nidia Fuentes, Analyst

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.12:2008
	TKN DA	(Water)	RPD calculations based on %Recovery
	Total Phosphorus DA	(Water)	J-Flags used
	Total Phosphorus DA	(Water)	RPD calculations based on %Recovery
B404090-MS2	TKN DA	Total Kjeldahl Nitrogen	Exceeds lower control limit
B405068-MS2	Total Phosphorus DA	Total Phosphorus	Exceeds upper control limit